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***‘I’m not trusted in the kitchen’: food environments and food behaviours of young people attending school and college***

Tyrrell RL<sup>3</sup>

Townshend T<sup>5</sup>

Adamson AJ<sup>1,4</sup>

Lake AA<sup>1,2</sup>

<sup>1</sup> Fuse – UKCRC Centre for Translational Research in Public Health, UK

<sup>2</sup>Centre for Public Policy and Health, School of Medicine, Pharmacy and Health, Wolfson Research Institute, Durham University Queen’s Campus, Thornaby, Stockton-on-Tees TS17 6BH, UK

Telephone 0191 334 0668 Fax 0191 334 0361

<sup>3</sup> Division of Health Research, Faculty of Health & Medicine, Furness Building, Lancaster University, Bailrigg, Lancaster, LA1 4YG, UK

<sup>4</sup> Human Nutrition Research Centre, Institute of Health & Society, William Leech Building, Medical School, Newcastle University, Newcastle NE2 4HH, UK

<sup>5</sup> Global Urban Research Unit, School of Architecture, Planning & Landscape, Newcastle University, Claremont Tower, Newcastle upon Tyne, NE1 7RU

[\\*amelia.lake@durham.ac.uk](mailto:amelia.lake@durham.ac.uk)

[r.tyrrell@lancaster.ac.uk](mailto:r.tyrrell@lancaster.ac.uk)

[tim.townshend@newcastle.ac.uk](mailto:tim.townshend@newcastle.ac.uk)

[ashley.adamson@newcastle.ac.uk](mailto:ashley.adamson@newcastle.ac.uk)

\*corresponding author.

## ***Abstract***

### **Background**

Food behaviours are important in the context of health and obesity. The aim was to explore the environments and food behaviours of a sample of young people in the North East of England to further understanding of the relationship between eating behaviours and environmental context.

### **Methods**

Focus groups were conducted with four groups of young people aged 16–20 years (n=40; 28 male, 12 female) between November 2006 and June 2007. Analysis was informed by grounded theory methods and was an iterative process of identifying themes across the transcripts.

### **Results**

Topics explored included; their main environment, home food responsibility and cooking, food outside of the home, where food was purchased/ obtained, where food was eaten and with whom. Emergent themes included; the value for money in food purchases, time convenience, the car as a means of accessing food, and health perceptions.

### **Conclusions**

The complexities of the food environment were illustrated. This work has highlighted the importance of the home food environment and parents, and indicated the importance of factors such as time and cost in this age group's food choices. The behavioural norms around food behaviours merit further exploration for this population in transition between adolescence and adulthood.

## ***Introduction***

Relative to other age-groups, less is known about the behaviours of older adolescents (1), particularly their eating habits (2) and other lifestyle behaviours contributing to the development of obesity in the period of transition from adolescence to adulthood (3, 4). This transition is an important period of growing independence from parents (5), the formation of own eating habits, increased mobility (reaching the legal age to drive), the move from school into employment or further education (6) and the shaping of individual identity, values, beliefs and morals (7). These processes influence the food choices and behaviour choices made by young people and may precipitate or reinforce behaviour changes. However, more research is needed to understand the influences that this period of transition may have on establishing long term health related behaviours (4).

Obesity in young persons is a major concern, and prevention of obesity is a high public health priority (8); it is difficult to treat and there is a high risk of persistence into adulthood (9). Body Mass Index (BMI), adverse dietary patterns (10) and sedentary behaviour (11) track into adulthood (12). Obese adolescents are likely to have poorer health and reduced life expectancy (13). While the majority of young people do not regularly drink alcohol to excess (14) this is the age when so-called 'binge drinking' becomes normalised for a proportion of young people (15).

The causes of obesity are multi-factorial and include biological, psychological, behavioural and social aspects as well as broader environmental issues such as physical, economic, political and socio-cultural factors (16, 17). Environments that promote excessive food intake and discourage physical activity are seen as a contributing factor to the current obesity epidemic (18). Food behaviours and food environments are seen to be important drivers of obesity (16). Food and beverages consumed outside of the home are associated with higher energy intakes than foods prepared at home (19). Dietary behaviours are an important contributing factor to socioeconomic inequalities in overweight and obesity (20).

The sample within this paper crosses the boundaries of adolescence (10-17 years) and that of emerging adulthood, the transition to adulthood (18-25 years) (21, 22). Frequently, the eating habits of young people are perceived to be of an irregular pattern with missed meals, high energy, convenience or fast foods (23); a tendency to eat outside of the home and to 'graze'<sup>1</sup>. These eating patterns accompany the change in their socialisation patterns from family to independence and stronger associations with their peers (24). Recent market research data from over 16's in Great Britain indicated that young adults (20-24 years old) were the largest group to have visited fast-food outlets in the last six months (25). In a group of 16–20 year olds in full time education in the North East of England, Lake et al. (1) found sedentary behaviours were significantly associated with less healthy eating patterns. This work identified that further development was required to fully understand this complex interaction between behaviours, and environmental contexts and ultimately obesity prevention; in particular individual perceptions of the environment in relation to food.

Understanding the food related behaviours in this age-group, and the food environments they use is an important step towards developing effective interventions for the prevention of obesity. To date research around obesogenic environments has focused on particular environments, such as home neighbourhood, workplaces or school environment (26). This exploratory work aimed to understand food related behaviours and the food environment of young people within the North East of England.

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<sup>1</sup> Eat frequent snacks at irregular intervals

## ***Methods***

Using maximum variation sampling (27) (in order to observe a wide range of perspectives from young people) the study aimed to recruit a sample of young people from a range of settings; i.e. school, further education colleges, workplaces and NEET<sup>2</sup>, but not from universities. University students were not recruited in this study as the intention was to capture the lesser studied 16-18 year age range where young people begin to make more food choices for themselves. The study was approved by Newcastle University's ethics committee.

Participants were invited to take part in the study entitled 'You and Your Space' through a brief presentation to one class in a school and three classes in a college. A written information sheet was also provided. Respondents were given opportunities to ask further questions and informed written consent was obtained. Access was not gained to any workplace.

Focus groups were selected as a method to facilitate and stimulate discussion, and encourage the young people to explore unforeseen topics (28). The aim was to conduct at least five focus group interviews with around 40 participants. Focus group interviews were conducted over a nine month period by two facilitators (AAL and TT).

Previous work (1, 2) was used to develop the topic guide which focused on the way young people interact with, and perceive their environment in relation to food behaviour and physical activity (29). This paper reports only on the food environment. The following topic areas were covered within the focus groups: their main environment; home food responsibility and cooking; food outside of the home; where food was purchased/ obtained; where food was eaten and with whom.

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<sup>2</sup> Not in Employment, Education or Training

Interviews were digitally recorded, anonymised and transcribed verbatim. The transcripts were verified by a facilitator. The data was imported into the qualitative analysis software package NVivo 7 (QSR International Pty Ltd. Australia) which was used to manage the data, to log emergent themes and to develop a coding framework. The analysis was informed, theoretically and procedurally, by grounded theory methodology research (30). The analysis was an iterative process of looking for broad themes and subthemes across the transcripts; and the research framework was constructed through inductive content analysis of the data (31), as well as examining for themes arising from previous empirical research. Transcripts were read by three researchers (AAL, RLT and TT) independently and compared to establish the emergent and recurrent themes in the data.

Focus groups have been coded according to the student's background denoted by Sport (Sp), School (S), or Design (D) (Table I).

## ***Results***

### **Recruitment**

It was difficult to recruit young people within the workplace. While contacts were made to local apprentice schemes, none agreed to participate in recruitment. Despite contacting three schools, only one school agreed access to an A-level<sup>3</sup> student group. A local further education college provided access to three groups of students from two subject disciplines (first year design and first and second year sports students). A local Connexions<sup>4</sup> centre agreed to recruit young people who

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<sup>3</sup> The Advanced Level General Certificate of Education, (A-level), are studied over a two-year period and are recognised as the standard for assessing the suitability of applicants for academic courses in English, Welsh, and Northern Irish universities.

<sup>4</sup> Connexions was a UK governmental information, advice, guidance and support service for young people aged thirteen to nineteen created in 2000 following the Learning and Skills Act. Connexions Centres, around the country, offered support and advice on topics including education, housing, health, relationships, drugs, and finance. It is no longer a coherent National Service following the announcement of changes to the delivery of careers in England by the Coalition government.

were NEET however only two were recruited and have been excluded from the analysis.

## **Descriptive statistics**

Four different groups of young people between the ages of 16 – 20 years (n=40; 28 male, 12 female) took part in four separate focus groups. It was decided at this point not to recruit additional groups as data saturation was reached with no new themes emerging. These focus groups were conducted within the school and college environment and were therefore constrained by class time. With the exception of one respondent who lived in student accommodation, all participants were living with at least one family member. The college was a city centre college, while the school was in a peri-urban<sup>5</sup> area.

Focus group discussions covered a range of topics in relation to food behaviours and food environments. Emergent themes included the importance of value for money in determining food purchases; time convenience, the car as a means of accessing food; and health perceptions including smoking and alcohol consumption. Themes are discussed under individual topic headings.

## **Main environment**

The concept of the 'main environment' was explored within the focus groups by asking about where the young people spend most of their time. This was not necessarily in relation to their food environment, and this has been described previously in relation to this groups' physical activity (29). Some described that they spent most time in and around their home, in the area where they lived, or their college/school. Many also referred to areas where their friends or extended family lived. Respondents described a difference in where they spent most of their time during the week and weekends for example, school/ college and part time jobs. Within the design student focus group, there was a distinct difference in where

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<sup>5</sup> Peri-urban areas are zones of transition from rural to urban land uses located between the outer limits of urban and regional centres and the rural environment.



males and females described spending most of their time; girls described the city centre as their main environment while males mentioned their home or a friend's home neighbourhood.

## **Home food responsibility and cooking**

### **Home food responsibility**

Where respondents lived at home, parents seemed to be overwhelmingly responsible for providing (shopping for) food. When it came to preparing food there was mixed responsibility. The respondent's control over what was prepared seemed passive in terms of cooking available foods. Within the 2<sup>nd</sup> year sports student group there was a notion that good food required you to 'slave over the stove' (FG3 Sp2 male). A female respondent reported cooking for her shift-working parents:

I make quite a lot of food, cos me [my] mam and that works late so they usually say 'will you make the tea [evening meal]?' and that, so I do quite a lot. (FG4 S female)

When asked what she cooks:

Like if they want, not a Sunday lunch but a proper dinner during the week like veg...(FG4 S female)

In response to this description of her cooking, there was general admiration from two of her classmates one who 'couldn't' (FG4 S female) cook and another who 'Wouldn't even know how to turn the pan on' (FG4 S male).

Mothers were frequently described as being responsible for food at home, though one grandfather (FG1 D male), and one father were mentioned (FG4 S male).

Often the young people indicated that they weren't responsible because they couldn't cook (see cooking ability). A few mentioned being responsible for aspects of eating, like setting the table (FG4 S male). Even though some of the school students had cars and reported visiting supermarkets (at lunch times) on a regular basis, they were rarely asked by parents to purchase food for the household (or they didn't

admit to it within the focus group). There was a suggestion, within two groups (FG3 and FG4), that they would prefer to live at home whilst at university as they wouldn't have to cook for themselves.

### **Cooking ability & food shopping**

There seemed to be a range of cooking ability in the respondents interviewed. Some described making lasagnes, Sunday lunches, curries (using jars of sauce), bolognese, 'fry-ups' and microwave meals including microwave chips. Cooking tended to be described as 'jar' based; microwaving a pizza was considered to be cooking, as was cheese on toast which could indicate limited cooking skills.

Some were only cooking for themselves, while others appeared to be responsible for cooking for their family, for example if their parents were working late (see Home food responsibility). At the other end of the spectrum, some respondents described not being allowed into the kitchen:

I'm not trusted in the kitchen (FG1 D male)  
Mum wouldn't let me in the kitchen (FG1 D male)

Some were of the belief that they could not cook, and expressed a lack of confidence or enthusiasm for cooking:

I can't cook. I just can't be bothered...I burn toast. (FG4 S female)  
Moderator: Right, so have you ever cooked.  
I have but there has always been someone watching us in case I burn it. (FG4 S female)

Only one respondent was living in student accommodation away from his family. He described how he tended to eat more take-away meals rather than cook his own food for economic, as well as cooking skill related reasons (see section 'Take-away food & value for money'). He described how school had taught him how to bake but not necessarily other cooking skills such as how to prepare a meal. Others chose not to get involved in cooking and some were only involved when it was a necessity such as parents being on holiday.

Because a respondent was involved in food preparation at home did not necessarily mean that they were involved in the purchasing of the food. Asking a group of all male sports students (FG3 Sp2), many of whom did cook for themselves, if they shopped for the food resulted in laughter! Across the groups there was an indication that food shopping was not an accepted activity within the group. In general the young people appeared to be disengaged from food shopping. When asked where the main food shop came from, one response was that he had 'absolutely no idea' (FG1 D male). This quote came from a student who was involved in food preparation (therefore had presumably seen packaging even if he wasn't involved with shopping, illustrating the level of disconnection involved). This was echoed in the first year and second year sports student's discussions (FG2 and FG3). Home food shopping did not appear to be something the young people in the sample got involved with regularly, it was the responsibility of others. There was a sense that when they were younger they had to go food shopping with their parents. It was also raised that going to the supermarket involved spending more money, compared with having a take-away (FG3 Sp2 male). One respondent mentioned being asked to do the shopping, but then not doing it anymore because they had purchased the wrong items (FG2 Sp2 male). It largely appeared that the food was 'there', i.e. at home, and the young people simply heated foods up. Examples they gave of foods they cooked included, pizza, chips, ready meals, and cups of tea. However, there was one exception to this overwhelming consensus; one male felt his parents bought lower standard foods. There were a few comments which indicated their lack of faith in their parents (usually mothers') ability to cook.

Food eaten at home did not necessarily mean it was prepared at home, respondents mentioned ordering in take-aways and bringing McDonalds back to their home. One respondent, attending school, mentioned that he did not eat at home during weekdays; he didn't have breakfast and had lunch at school or elsewhere; evening meal was taken on the way to work/ or another activity (FG4 S male). Despite their

lack of engagement with how food got to their home, for the majority the 'home' food environment seemed to be an important food source.

### **Eating together, food rules & where food is eaten at home**

Food behaviours at home did not necessarily mean food was eaten together as a family unit; respondents mentioned other family member's work-life patterns and how meal times were complicated with people's shift work:

It depends on what time they are in, cos me dad works different shifts so he is not always in and me mother is always picking us up and me brother is always running around somewhere. (FG4 S male)

Few respondents stated that they had to be back at home for specific meal times, most seemed to indicate they could come home whenever they liked. It appeared to be the norm that food would be heated up (microwave or oven) when they got home:

Just hoy [throw] it in the microwave when you get home (FG4 S female)

While respondents mentioned parent's shift work patterns as a reason to eat whenever they wanted, others felt there was some kind of obligation on them to be home for meals:

If they have made it, you feel like you have got to be in to eat it. (FG4 S male)

There seemed to be some rules around where food was eaten, for example having to eat at the table so as not to spill food on the floor:

I sit in me dining room, I have to, because if I spill anything on the floor, I would get kicked out or something. (FG4 S male)

Other respondents described eating in a range of locations in their home including their bedroom, while watching TV and eating at a table.

## **Food outside of the home**

All groups of students obtained food from outside of their home. Where and what food they accessed was dependent on cost, their location and whether or not they had access to a car or a friendship group with a car.

Among one group of students (FG1) there seemed to be a huge distrust relating to large chain fast-food outlets. There was a rumour about bodily fluids in the milkshake and rumours relating to the burgers being out of date. Certain outlets were perceived to be of better quality. While an international sandwich outlet was perceived to have a huge range of food choices, it was seen as an expensive alternative by the other groups:

Well you can go to Greggs [UK commercial bakers] right, and you can buy a sandwich from Greggs right for what £2 and it cost you like a fiver at Subway [international sandwich chain] and I think that's shocking. (FG2 Sp1 female)

There was a comparison between the cost of outlets. Greggs, a national commercial baker, was perceived to be of much better relative value than large chain burger outlets by two groups (FG2 and FG4). Greggs was described as a popular food outlet for all groups of respondents. The kinds of food mentioned included savoury pasties, sausage rolls and sweet foods like 'splits' [iced buns]. Despite these food choices, Greggs was perceived to be the healthier outlet choice. During a discussion about the healthiness of outlets, one respondent commented that an international burger outlet served salads and was therefore healthy, his classmate quickly pointed out that you didn't go to that type of outlet to eat salads.

## **Take-away food & value for money**

Take-away food such as Chinese, or fish and chips were mentioned. A discussion with a respondent, who did not live with his parents, was illustrative of the economical sensibility attached to food consumption. This individual reported that he shopped minimally for food and the rest of the time he ate food from the 'chippy'

[take-away] as it was cheaper. When probed further about the cost of this, he elaborated:

About £3 from a chippy

Moderator: So what do you get for that?

Margherita [pizza] some kind of garlic sauce and a coke for £3

Moderator: So how many nights a week would you have that

Probably about 3 or 4

Moderator: So economically does that make more sense than going and buying raw food in?

Food from Morrisons [UK supermarket] you have got to walk all the way down the road, you have got to get to Morrisons and you have to buy your food and you end up paying I don't know £3 for a normal pizza and then you are buying chips whatever and end up costing more. (FG3 Sp male)

One of his classmates challenged him that in the supermarket there were lots of foods to buy, to which he responded:

Pizza is cheaper, if you want to go and buy all that Quorn<sup>1</sup> rubbish (because I am a vegetarian) if you go and buy that then you spend about £4 to something that won't fill you up. (FG3 Sp male)

(Quorn products are made from Mycoprotein which is a protein source that is meat free.)

For others, take-aways were associated with weekend behaviour, this included the consumption of kebabs – either purchased on the way home from a night out, or delivered. Although these were perceived as not necessarily the cheapest choice, they were the most convenient. A number of respondents mentioned the 'free delivery' aspect of take-away food as being convenient and economical.

### **Food at lunch time & the use of cars**

Across the four groups of respondents there was a diverse range of responses relating to where food was purchased or eaten at lunch time. For the college students (FG1-3), the length of lunch break determined lunch time location. When time was limited they consumed food on the campus or close to the campus. In some groups, when they had longer durations of time they used classmate's cars to

drive to other locations, such as Toby-Carvery [British carvery chain] or McDonalds, and other outlets in the city centre.

Individuals expressed concern about the cost of foods at lunch time. For some of the college students, lack of money was an incentive for bringing food to college from home. Close to their college, participants described a shop which was reported to be economically priced and popular. The older 2<sup>nd</sup> year sports students discussed the range of food available on the college site in terms of its healthiness but this was not raised by the other groups.

Those attending school complained that the food available on the school site was not good. The school had an open gate policy at lunchtimes and students mentioned going to a local sandwich shop, which also sold pies. Groups of friends drove to McDonalds or Greggs, which was ten minute drive away. Alternatively, they would travel to a Tesco supermarket to get lunch. There was discussion that their classmates sometimes contributed to the cost of petrol. Respondents were using mixture of their own money that they'd earned from part time jobs and money given to them by parents for lunch.

### **Time, place and convenience**

There was a notion of fitting food in around lots of other activities and having to 'rush a sandwich' (FG4 S male). There was the awareness that take-away food was time efficient. Time available determined where respondents ate at lunch times; duration varied from 30 minutes through to two hour breaks at college, or breaks from part-time work.

Ready prepared hot food was also purchased to be consumed at home and outlets providing this food were described as being in close proximity to their home.

The college students (FG1, 2 and 3), whose college was located close to the city centre, would go into the city centre when they had a longer lunch break and would choose a fast food restaurant in the city centre.

While some of the first year sports students described getting coffee on their way to college, the way home from college seemed a more popular time to buy food (FG2). Again Greggs, on route to the college, featured for both sweet and savoury snacks. McDonalds was mentioned by the School respondents (FG4). These peri-urban located students used cars at lunch time to get food from outside the school and used McDonalds as a food source on their way to work/ school/ home.

### **Health perceptions, smoking and alcohol**

The respondents across all four groups did not appear to be concerned about their future health. Students on the sports courses perceived themselves as being engaged in higher levels of physical activity compared with their counterparts.

However, overall there was little expressed interest in living healthy lifestyles:

I do actually think we should eat healthier and stop smoking and all that, but I am just not bothering you know. Just because we are doing a sports course we are doing physical activity anyway right. (FG2 Sp1 female)

There were 'social smokers' (FG1 D male) within the various groups. While two groups of students were involved in a health subject (physical activity) there was a relaxed attitude to behaviours likely to harm health and a belief that doing one 'good' thing e.g. sports course, counteracts the effect of 'bad' things like smoking.

Alcohol emerged as a theme within the focus groups discussion. There was difficulty in discussing alcohol within the larger focus groups, in one group, the topic was greeted with comments like 'now we're talking' (FG2 Sp1 male). The smaller group settings seemed to provide more realistic responses with regards to alcohol.

Respondents indicated that drinking alcohol marked a difference between weekdays and weekend days. It also resulted in changes in eating behaviours:



And I get a kebab or something after I have been drinking. Normally...

(FG3 Sp2 male)

I normally work and then wait until the night time and go out drinking.

(FG3 Sp2 male)

The young people talked about going to friend's homes more than pubs to drink.

Pub entry was dependent on where they would be admitted (many being under the legal age to drink). The older 2<sup>nd</sup> year sports students (FG3) described carrying ID as a precaution to gain access to places that served alcohol. Value for money around drinking was a concern for the 1<sup>st</sup> year sports students (FG2); they preferred to drink at friend's homes or places round their neighbourhood. Within the design student group (FG1) respondents indicated that they did not drink during the week. When asked about parental consent and drinking it appeared that moderation was tolerated:

It depends how drunk. If I am not too drunk my parents are okay about it. (FG1 D female)

Depends what I do when I come in. (FG1 D male)

However, it appeared that parental approval was not granted for drinking on the street, they perceived parents to prefer them to be in a pub or a friend's house rather than on the street. The young people themselves described that their perceptions of safety changed when drunk, with some more unmindful of potential dangers (29).

## ***Discussion***

This paper has shown that, in this UK context, young people are a heterogeneous group who consider a range of environments as their main environment and are economically conscious in terms of food purchases. The home environment (and their parents) was important as a source of food; however this was clearly only one influence in terms of developing food behaviours. More broadly there were shared norms in attitudes and practice (such as it was not acceptable to be too interested in food purchase, or preparation). These attitudes are important to address. However, how these norms became established was far from clear, but strongly suggested that the social learning of food behaviours needs further investigation.

### **Main findings of this study**

The perceptions reported by the young people in this study provide researchers and policy makers with further understanding of the complexities of the environments, food environments and behaviours of young people. This period of emerging adulthood has been described as ‘overlooked’ in terms of weight-related research (4). While the focus groups provided rich data, this research was conducted in one area of the UK, the North East of England. However this work addresses issues which will be common to this age-group across other regions and countries. The findings indicate that young people lack confidence in their preparation and cooking skills, not being ‘trusted in the kitchen’ to fend for themselves. Although parents are the main food preparers of these young people, they lack faith in their parent’s ability to cook. A key finding is the perception that following one ‘good’ health behaviour (in this case being more physically active) compensates for the effect of other health-related behaviours (such as smoking and eating a unbalanced diet).

### **What is already known on this topic**

The first question addressed within the focus groups was that of exploring the concept of what is the ‘main environment’ of young people, i.e. where they spent most of their time. Food environment exposure research tends to focus on the foodscape surrounding the home (32). However in these respondents, their lives

and their movements were more complex; main environments were varied and depended on where their friends lived, their part time jobs, and whether or not they had a car. There were differences in weekend and week day environments; week day's being spent around schools or colleges and weekends covering a range of environments such as part time jobs, sports activities, home and friend's homes, the city centre. Within one of the four groups, there were clear gender differences in the participant's perceptions of *where* their main environment was. As with other aspects covered by these focus group interviews there was a lot of heterogeneity within these four groups and it is not possible to generalise.

Leaving school has implications for young people, becoming independent from their parents, both financially and with regard to their living environment which may include: work, further education, and possibly becoming parents (33). These four groups were at, or had just experienced transitions. The school students were about to leave school, the college students had left school and had transitioned to the different environment of the college. As well as transitions, there was the notion that personal mobility, in particular learning to drive and access to a car, had an impact on other behaviours. For example having a car, or being in a friendship group with access to a car, meant they had access to different food outlets further afield at lunch times that were previously inaccessible in the time frame.

In a study of Irish children and adolescents (aged 9-18 years), Fitzgerald et al. (34), found 16 – 18 years olds to be more autonomous compared to their younger counterparts. In the current study this autonomy was obvious; however the reliance on parents was still significant. A minority of respondents described how they were responsible for preparing food at home; the majority of respondents stated that others were responsible, though most appeared to be comfortable with 'cooking' food. However, definitions of 'cooking' need to be explored in future work as 'cheese on toast' and preparing cups of tea was considered to be 'cooking'. There was disengagement with regards to food shopping, even for those who did cook. Despite their lack of engagement with how food got to their home, overall the

'home' food environment seemed to be an important food source for these young persons. Studies of adolescents in Northern Ireland (35) and USA (36) have also shown that the home environment was of high importance. In this study, while the role of parents was not fully explored, it was clear they had an important role in providing food (as raw materials) as well as preparing meals for these young people.

Economics and getting value for money was an important theme relating to food. Being economically conscious in terms of buying 'better value' (in terms of amount) food from one commercial outlet compared with others was a common theme. Many within this sample were working part-time in addition to their study. Relating the cost of fast food to Body Mass Index (BMI) in US 12- 17 year olds, Powell (37), reported that higher fast food prices were statistically significantly related to decreases in adolescent BMI. In a separate US study, Powell and Han (38) found the cost of foods to be related to the foods consumed by low income young people (aged 12- 18 years). With regards to influencing food choice, cost is a significant factor (39).

In a slightly younger age-group (10-14 years) Epstein et al. (40) showed a relationship between the price and purchasing of foods. Increasing the cost of less healthy food would reduce their purchase of these foods. Similarly decreasing the cost of healthier foods will increase the purchase and consumption of these foods. Epstein et al's work is supported by the statements from the college student living in student accommodation who found it financially beneficial and convenient to get take-away food delivered to his home rather than visiting the supermarket and buying more expensive, and potentially healthier alternatives. A take-away is an immediate cost output and £3 for a meal may seem cheaper than buying ingredients from the supermarket which may cost more on the outset. However it could be argued that the supermarket could be cheaper in the long run in terms of being able to produce multiple meals.

However this discussion isn't limited to economics; these cost implications can be explored in terms of the balance between limited cooking skills and the need for forward/ future planning (e.g. purchasing ingredients) versus the immediate gain of having take-away food prepared and ready to eat. Respondents described a broad range of cooking skills. However the ability to plan future meals and food purchases may be more of an issue.

The example of the college student, who had access to a supermarket (within walking distance) but who choose the perceived cheaper option of take-away food can be related back to the notion that environmental availability of food alone is not a driver for behaviour. This student raised the issue of having 'to walk all the way down the road'. Reviewing the literature, White (41) suggests that "carrying shopping, as well as the problems of storage, remain important barriers to accessing supermarkets ..." (41) (p101). Simply increasing access to healthy and economically viable foods may not be enough, issues around transportation need to be addressed, as well as acknowledging that individual's perceptions of the food environment are not necessarily associated with objective measures of the food environment (42).

While alcohol consumption was not an original focus of the research, it was introduced into the discussions by young people themselves as a specific and significant element of their behaviour. Their comments, particularly discussion around behaviour while drunk, support research that suggests that while not all young people drink regularly by this age (i.e. while still under the legal age to purchase alcohol) a minority are regularly drinking and drink to excess (43, 44). The results also concur with findings that suggest that underage drinking in pubs has been largely eradicated, however, alcohol, in this age-group, is largely sourced from home and friends' homes, or proxy purchase from off-licence sales i.e. in situations which may be less likely to be monitored (15). Regularly drinking to excess at this age has a number of health consequences, both physical such as increased likelihood of alcohol related injury and liver disease; and mental, including depression and memory loss (45). However, as with other aspects of personal health there was a

perceived lack of urgency regarding personal health (46) which was succinctly expressed by a female first year sports student who described herself as “just not bothering” regarding healthy eating and smoking, balanced by doing a sports course and being active. In Poobalan et al.’s (47) Scottish sample of 18 – 24 year olds, there was a similar lack of concern about diet and future health. This lack of concern about health and following healthy guidelines is despite the high levels of health-related information this generation of young people will have received. As individuals progress from adolescence to adulthood, they perceive themselves to have an increased awareness of health-related messages (48). While it is acknowledged that nutritional knowledge is significantly associated with healthy eating (49), studies have found that knowledge of healthy eating was not reflected in young people’s food preference behaviour (50) and does not guarantee adherence to a healthy diet (51).

### **What this study adds**

These focus groups were early within a programme of work to explore the obesogenic environment of this age-group. From the perspective of developing future studies to explore food and physical activity behaviours in this population, understanding *where* to measure behaviours is important. This study has highlighted the importance of the home food environment and norms associated with this age group’s food behaviours. While the concept of an individual’s ‘environment’ may be difficult to define (26) developing an understanding of a definition of the environment and an understanding of how this environment is used, from the individuals’ perspective is an insightful process.

### **Limitations of this study**

There are limitations with this study including the generalizability of the findings to this age group. Focus groups were selected for reasons including their suitability for recruitment and feasibility issues. However, it was noted that discussions around alcohol were boastful, while food shopping was shunned. Additionally the focus group discussion revealed very few food related rules in households – which again

may be influenced by social norms and not wanting to appear they were told what to do. Four focus groups were conducted; the number of focus groups necessary to reach saturation may be three or four (52). Focus groups varied in size, which was beyond the control of the researchers; one limitation was the large numbers of participants in each group, which posed difficulties. Recruitment of this age group is challenging; this is a relatively small sample, there were a relatively high number of sport students and older than the intended 16-18 year olds. Although sport students may have induced a health-conscious bias, the young people in this study saw themselves as more physically active but as a consequence were not concerned about other health-related behaviours (such as smoking and diet). With respondents proving challenging to recruit, recruitment was sought through subject specific courses resulting in a male gender bias (28 versus 12 females). The ethnicity of respondents was largely reflective of the areas from which they were recruited. In addition, the majority of respondents lived at home with parents which limited their necessity to shop, which would be required if living independently. This lack of homogeneity within this sample and age group is likely to be replicated across other parts of the UK. As noted by other studies (47), it was difficult to recruit respondents who were currently in work or have NEET status and this was reflected in the lack of recruits from these background. Attempts were made to recruit from these groups via Connexions and apprenticeship providers without fruition. Subsequent research by the authors with this age group has also highlighted the issues associated with recruitment outside of the education system with limited success from contact with youth groups/community centres, large employers such as supermarket chains, and health and leisure centres (53). One unemployed male and an individual attending a school for pregnant students were recruited and interviewed in a single focus group but were not included in the present analysis. Their views, circumstances and the challenges they faced were very different from the participants in the other four focus groups. In order to fully explore and understand these issues, the authors concluded that a wider perspective would be required.

## ***Key words***

young people; obesity; obesogenic environments; food environment; perceptions; transitions

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Table I Focus group description, size and gender distribution

<b>Focus group</b>	<b>Description</b>	<b>Focus group size</b>	<b>Male</b>	<b>Female</b>	<b>Age (years)</b>
FG1 D	College design students	11	5	6	16-18
FG2 Sp1	College sports students year 1	12	9	3	16-19
FG3 Sp2	College Sports students year 2	11	11	0	16 – 20
FG4 S	School students	6	3	3	17-18
<b>TOTAL</b>		<b>40</b>	<b>28</b>	<b>12</b>	16-20

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